Remarks:

This amendment is submitted in an earnest effort to advance this case to issue without delay.

The claims have been amended to define the invention with somewhat greater particularity over the art.

Claim 21 has been amended by the insertion into it of the "cleaning" step hitherto recited in claims 32, 33, 37, and 38. Claims 32 and 33 have been amended appropriately, and claims 37 and 38 have been canceled.

In addition The dependencies of some of the claims have been changed as they formed combinations of features that did not really depend on one another.

The standard system of using a spinneret, that is the admitted prior art (APA), normally consists of closing partially blocked holes, of which there are thousands in some spinneret plates, with graphite plugs fired to a "ceramic" state and stable at temperatures "in excess of 1000°C" (Substitute Specification page 2, line 17 to page 3, line 17). When so many holes have been plugged that the spinneret plate is no longer usable, it is removed from the machine, and subjected to a two-step cleaning process, according to the APA:

1. A pyrolysis to clean plastic residue off the spinneret plate by gasifying it.

2. A mechanical knocking of the plugs out of the holes.

This second step can lead to damage to the valuable spinneret plate and is slow, but is necessary because the plugs are very hard and basically immune to chemical or thermal attack.

According to the invention the plugs are removed differently. First of all the plugs are partly made of an amorphous carbon binder so that they are quite stable during use of the spinneret plate and the plugs stay solidly in place, even at high temperature. This composition of the plugs, however, makes it possible to remove them by an oxidative treatment that destroys the amorphous-carbon binder and reduces the plugs to ash in the form of a basically loose powder. This powder can easily be cleaned off the plate with a simple ultrasonic or water-jet treatment that will do no harm to the plate, itself made of a very durable metal, typically steel.

The main claim clearly describes the step of making the plugs with an amorphous-carbon binder and then removing them by an oxidative treatment. The amendments clarify that this oxidation produces ash that is then cleaned off the plate.

The claims are rejected on the admitted prior art (APA) in combination with previously cited US 5,728,226 of Hoyt and a new reference, US 4,002,426 of Chenevey.

Hoyt describes (column 1, lines 27 through 44) a known system for cleaning plastic out of a spinneret involving two "burn out" treatments. There is no discussion whatsoever in Hoyt of any plugs of a material other than the plastic that is being extruded through the spinneret that have to be removed. No temperatures are given, but it is presumed the treatments are carried out a high enough temperature to decompose plastic while not harming the metal plate being cleaned.

Combining the teachings of the APA with those Hoyt would produce a system where "ceramic" plugs stable up to 1000°C were used in the Hoyt plate and subjected to two burn-offs. This would not result in the system of this invention as defined in claim 1 because in order to burn off the ceramic plugs suggested by the APA, it would be necessary to heat the mold plate to 1000°C or more. Presuming the plate was the standard steel construction into which the extrusion orifices were machined, such heating would damage it, probably changing its temper or other critical properties and rendering it unusable. It is never obvious to do something that does not achieve the desired end: If the burn-off of Hoyt were modified to destroy the ceramic plugs of the APA the result would be a ruined die plate.

Presumably Hoyt is merely cited to show the first pyrolysis step used to clean plastic residue off the spinneret plate, not to remove any plugs since a heat treatment hot enough to use the ceramic plugs of the APA would ruin the spinneret plate.

Thus it would not be obvious to combine the APA and Hoyt.

Chenevey describes in column 7, lines 1-4, that "amorphous carbon or graphitic carbon fibrous products may be incorporated in a binder or matrix and serve as a reinforcing medium." This binder may be used in something that must be "fire resistant" (column 7, lines 9-10). There is no hint or mention that plugs with such a binder could be used in a spinneret and that they could be destroyed by an "oxidative treatment" to clear them from the spinneret. Indeed the word part "oxid" is not to be found in the entire text of the Chenevey reference.

Thus it is apparently the examiner's position that a person skilled in the art who was looking for an alternative to the ceramic plugs that are traditionally used in a spinneret would have recourse to the Chenevey disclosure, which concerns the production of "acrylic fibers and films," and would, from it, realize that the plugs could be made with an amorphous-carbon binder, and that it would then be obvious, instead of the standard mechanical or pyrolitic treatment for cleaning the spinneret, to use an oxidative treatment to reduce the plugs to ash, then clean off the ash.

Such a sequence of conclusions is far from obvious. There is nothing in Chenevey to suggest that his amorphous-carbon binder could be used to make spinneret-hole plugs. Nor is there any suggestion anywhere in Chenevey, or any other reference cited by the examiner, that objects made of with an amorphous-carbon binder could be reduced to easily cleaned-off ash by an oxidative treatment. Nothing in the art suggests the oxidative treatment of this invention in any context, much less in the specific context of removing plugs from holes in a plastic-production spinneret.

The rejection is clearly being made by hindsight, by assembling references that teach elements of the invention in totally different contexts and then combining them in a way nowhere suggested in the reference with a further step - oxidative treatment - not shown in any reference. This §103 rejection must therefore fall, with allowance of all claims.

If only minor problems that could be corrected by means of a telephone conference stand in the way of allowance of this

case, the examiner is invited to call the undersigned to make the necessary corrections.

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